JSIMS Lessons Learned

COMOPTEVFOR

Navy VV&A TWG

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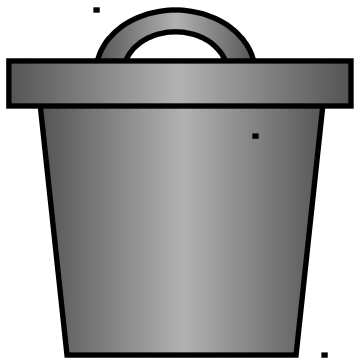
what's a JSIMS?

"The mission of the Joint Simulation System (JSIMS) is to provide readily available, operationally valid computer simulated environments for use by the Combatant Commanders, their components, other Joint organizations, and the Services to jointly educate, train, develop doctrine and tactics, formulate and assess operational plans, assess warfighting situations, refine operational requirements, and provide operational input to the acquisition process. "

- JSIMS MNS

what we already knew:

- modern simulations are complex
- our representations need more realism
- there are too many redundant sims

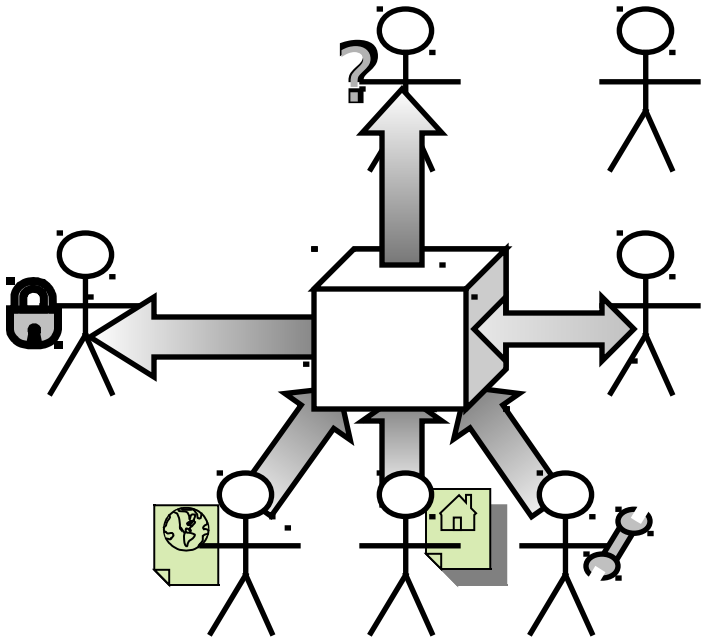


what we learned:

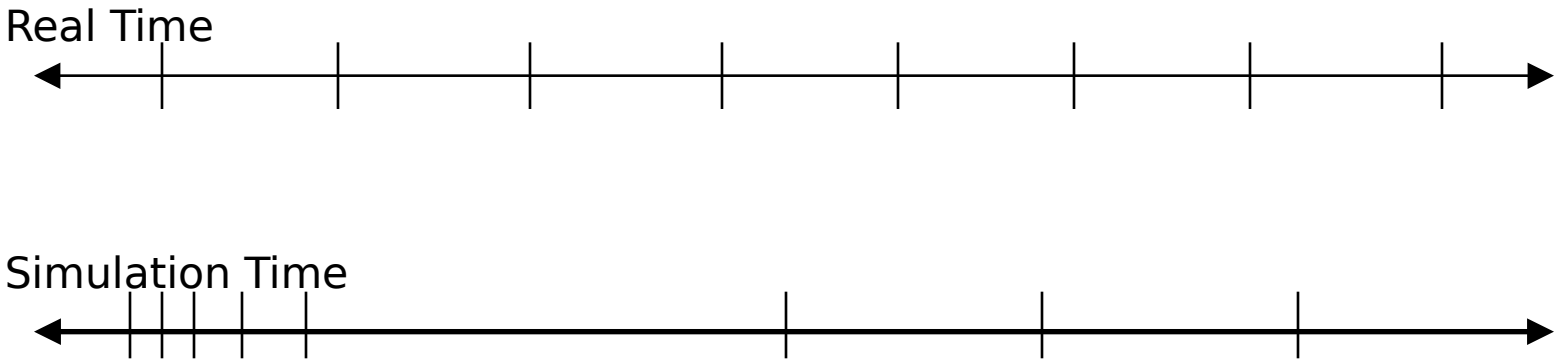
- M&S isn’t a cottage industry (any more)
- there is no real world
- the intended uses didn’t read the org chart
- …

M&S isn’t a cottage industry

- ~~user~~
- operator
- sponsor
- developer
- modeler
- maintainer
- remote site
- (security) expert
- secondary user
- integrator



maintain 1:1 game time ratio

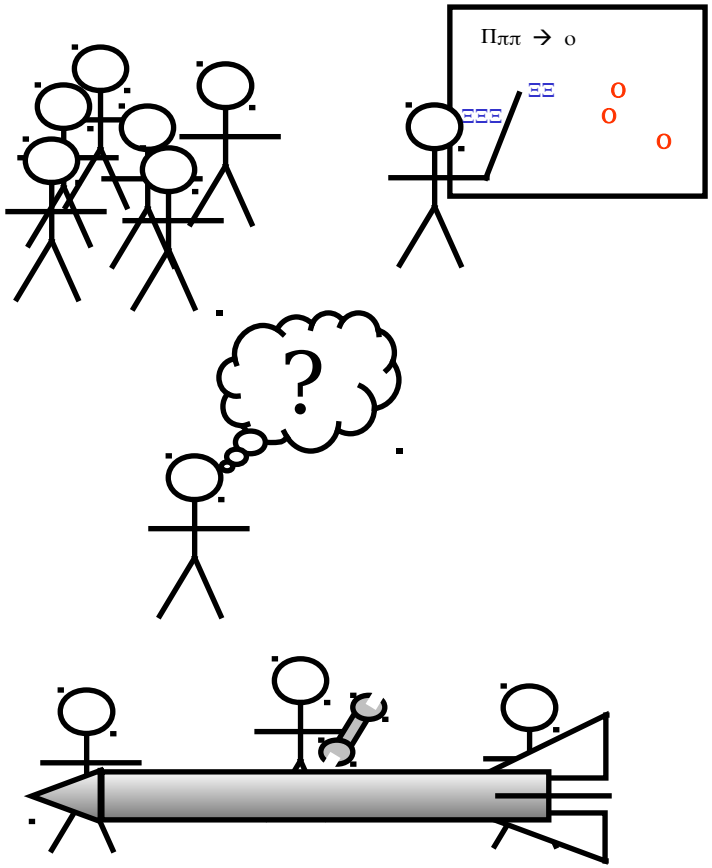


- modelers : average game speed per day
- trainers : average game speed in 1 hour

there is no real world

AAM effectiveness is a function of …

a. doctrinal compliance
b. a representative threat
c. the physics of the missiles



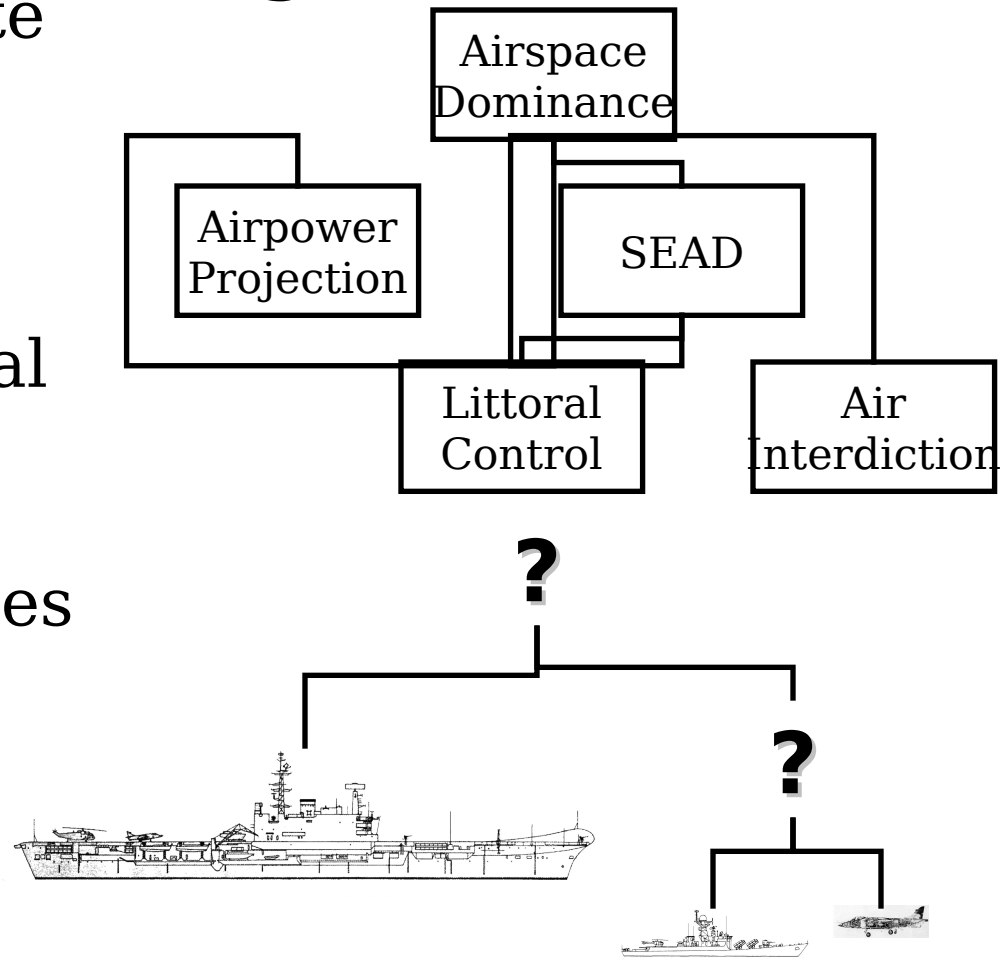
engagement outcomes

“The behavior of entities within the federates is not predictable. Detection and classification ranges for ships, automated execution of flight plans, and response to engagement in land units all behaved differently in different runs of the simulation under the same conditions as far as they were controllable by the operators.”

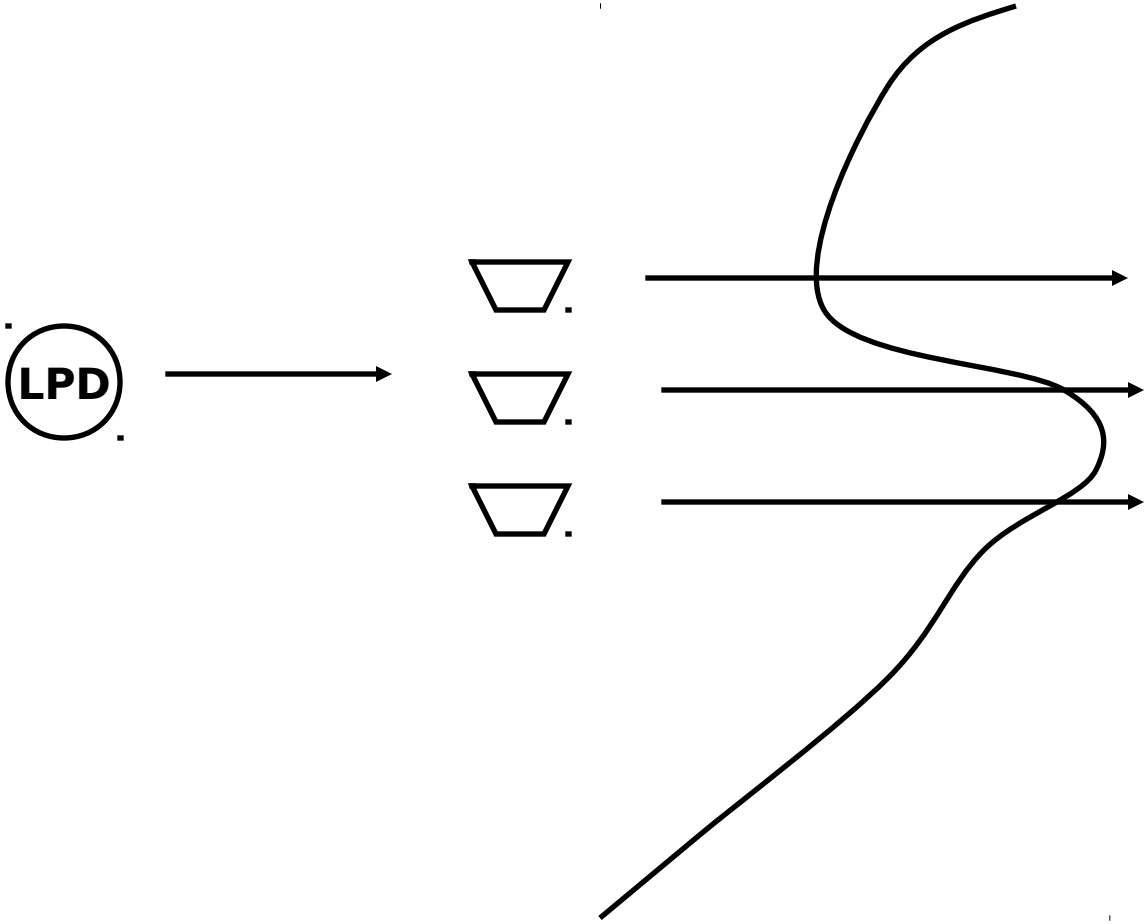
the intended uses didn’t read the org chart

- missions aggregate
- they have implicit meta-knowledge
- the performance space is non-formal

- means aggregate
- they have interfaces
- the performance space formally bounded



amphibious assault



who cares?

- verification requires an M&S conops
- validation is not a third-party objective process
- accreditation can be impossible

- VV&A cost/quality depend more on the simulation tasking than the simulation

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